



BRIGHAM AND
WOMEN'S HOSPITAL

CASES IN GLOBAL HEALTH DELIVERY

GHD-018
APRIL 2011

HIV/AIDS in Brazil: Delivering Prevention in a Decentralized Health System

“It’s not money that we need now. We need to see things differently. We need to move the agenda at the state and local levels so they plan better. Fostering and strengthening this type of structure is a long-term process. It won’t happen in my lifetime, but it speaks to the soul of the Brazilian government.”

Dr. Mariângela Galvão Simão, director of Brazil’s National Department of STD, AIDS and Viral Hepatitis

“Decentralization is a double-edged sword. Sometimes it can be very good and sometimes bad.”

Dr. Francisco Iganio Bastos, epidemiologist at Oswaldo Cruz Foundation

In December 2009 Brazil’s top HIV/AIDS official, Dr. Mariângela Galvão Simão, reflected on her country’s progress combating the disease. Brazil’s early and aggressive response to HIV/AIDS, grounded in human rights and cooperation between government and civil society, was widely considered an international success. In 1996 Brazil became the first developing country to offer publicly financed antiretroviral treatment to all people living with HIV/AIDS. By 2000 the HIV epidemic had stabilized and resembled those of the United States and Western Europe, with the highest rates of infection concentrated among high-risk groups, including gay men, sex workers, and injection drug users.

Still, challenges persisted, and much work remained. In 2009 new cases were increasing among young, gay men and among poor women in smaller cities, where the health system and civil society advocacy were weakest. Additionally, infection rates were increasing in cities where HIV programs had been neglected following the transfer of financial and administrative power from the federal level to state and city governments. In 2009, six years after this decentralization process began, results were mixed. Seated in her office at the National Department of STD, AIDS and Viral Hepatitis in the capital of Brasilia, Simão said she believed that sustaining HIV prevention services across Brazil required strengthening state and municipal capacity to deliver AIDS prevention and treatment services via the nation’s decentralized public health

Sarah Arnquist, Andrew Ellner, and Rebecca Weintraub prepared this case for the purposes of classroom discussion rather than to illustrate either effective or ineffective health care delivery practice.

Cases in Global Health Delivery are produced by the Global Health Delivery Project at Harvard. Case development support was provided in part by the Bill & Melinda Gates Foundation. Publication was made possible free of charge thanks to Harvard Business Publishing. © 2011 The President and Fellows of Harvard College. This case is licensed Creative Commons [Attribution-NonCommercial-NoDerivs 3.0 Unported](https://creativecommons.org/licenses/by-nc-nd/3.0/).

We invite you to learn more at www.globalhealthdelivery.org and to join our network at GHDonline.org.

system. Given the expansiveness of Brazil, however, the Department had to target its funding and technical support to those places most in need.

Overview of Brazil

In 2009 Brazil was the fifth largest and most populous country in the world with 191 million people living on 8.5 million square kilometers. The racial breakdown of Brazil was 53.7% white, 38.5% mixed white and black, 6.2% black, and 1.6% other. Three-quarters of Brazilians identified as Roman Catholic, 15% as Protestant Christian, 7% as nonreligious, and the remainder practiced other religions. Brazil's 26 states, its federal district, and its 5,500 municipalities were divided into five heterogeneous regions. The Southeast and South regions were the most populous, wealthy, and developed. The North and Northeast regions, which included the Amazon forest, were the most remote and poor areas with low levels of development (see **Exhibit 1** for map).¹

From 1964 to 1984, a military dictatorship controlled Brazil. Mass protests and civil society mobilization against the dictatorship led to democratic elections in the mid-1980s. By 1989 Brazil had adopted a new constitution and became a democratic republic with a federal governance system.¹

In 2009 Brazil was among the world's fastest growing emerging economies.² After his election in 2002, President Luiz Ignazio Lula de Silva (Lula) enacted the popular and ambitious anti-poverty program, *Bolsa Familia*,¹ which paid a monthly allowance to 11 million families.³ However, while *Bolsa* and other anti-poverty programs helped reduce the portion of Brazilians living in poverty, Brazil still had one of the world's most inequitable income distributions. The richest 20% of the population controlled 59% of national income.⁴ Brazil was rapidly urbanizing, and poverty was increasingly an urban problem. In sprawling mega cities, including Rio de Janeiro and São Paulo, one-third of people lived in *favelas* (slums). Racial disparities in wealth and health were common.⁵

Table 1: Basic Socioeconomic and Demographic Indicators²

Indicator		YEAR
UN Human Development Index ranking	75	2007
Population	191 million	2007
Urban population (%)	85	2009
Drinking water coverage (%)	97	2008
Poverty rate (% living under USD 1.25 per day)	5.0	2007
Gini index	57	2004
GDP per capita in PPP (constant 2005 international dollar)	8,949	2006
GDP per capita (constant 2000 USD)	10,100	2009
Literacy rates (%) (adults, youth)	90, 97	2007

¹ *Bolsa Familia* was a conditional cash transfer program that provided cash payments to poor households that met certain behavioral requirements, generally related to children's health care and education.

² This data comes from the following sources: United Nations (UN), United Nations Children's Fund (UNICEF), World Bank, United Nations Educational, Scientific and Cultural Organization (UNESCO).

Health in Brazil

Between 1990 and 2007 Brazil's average life expectancy increased from 67 to 72 years, and the infant mortality rate dropped from 48 per 1,000 live births to 18.⁶ Immunization rates were high, and nearly all babies were born in hospitals.⁷ Significant disparities in health existed between races. Whites generally were healthier than black and indigenous populations. Brazil's maternal mortality rate in 2005 ranged from 67 per 100,000 births in the Northeast to 41 in the Southeast.⁸ In the second half of the twentieth century, chronic diseases replaced infectious diseases as the dominant causes of mortality and morbidity. About one-third of Brazilians died from stroke or heart disease, the top causes of death. In 2004 homicide was the third-leading cause of mortality, representing 5.3% of all deaths (see **Exhibit 2** for Brazil's mortality distribution by cause).⁸

Health System

Alongside the protests for democracy in the 1980s, *sanataristas* (public health advocates) protested the nation's severe health inequities. During the dictatorship, only formal-sector workers had health insurance, leaving millions of farmers and other informal-sector workers without a safety net. In response to the *sanatarista* movement, Brazil's new constitution declared health care a human right to be provided by the government.⁹ The *Sistema Único de Saúde* (SUS; Unified Health System) was created immediately thereafter to coordinate all public health care services and provide free care to all. The private system continued to exist alongside the public system.

Governance

Brazil's health care system was organized into two subsystems: the publicly funded SUS and the private Complementary Medical Care System. The SUS was the primary payer and provider of health care for three-quarters of Brazilians. The remaining quarter of Brazilians, wealthier and located mostly in the urban Southeast and South regions, purchased private health insurance and accessed private doctors and hospitals.⁵ The privately insured remained eligible to access care through the public system.

Five principles guided the SUS's development: 1) free, universal coverage; 2) comprehensive services from prevention to treatment; 3) equity; 4) decentralization; and 5) public participation.⁷ Throughout the 1990s laws and policies describing these principles were adopted and implemented.

The SUS governance was decentralized with a single command center at the federal, state and municipal levels.⁹ At the federal level, the Ministry of Health (MOH) developed and implemented national policy. At the state level, secretaries of health distributed funding to municipalities and directly coordinated some tertiary hospital and university medical services. Municipal health secretaries organized and delivered most patient care and public health services. Elected officials appointed public health administrators. Government elections often led to politically motivated administrative changes that disregarded technical competence or successful programs.¹⁰ The SUS principle of public participation (referred to as "social control") was carried out at all governance levels through public health councils. The councils included clinicians, bureaucrats, patients, and civil society organization (CSO) members who helped set programmatic and budgetary policy. The councils had statutory power, but their degree of influence varied by state and city.¹¹

Financing

Between 2000 and 2007 Brazil's federal budget for health care more than doubled.¹² The SUS was funded with tax revenues at each government level. By law, state and municipal governments had to spend

at least 12% and 15% of their respective budgets on health, and, combined, their expenditures represented more than half of all government health spending. In contrast, there was no stipulation on the level of federal spending. Despite health funding increases, policy analysts said the system suffered from chronic under funding and inequitable resource distribution.¹¹ In 2002 per capita public health spending in the Northeast region was USD 84, while in the Southeast it was USD 125.⁵

Table 2: Health System and Epidemiologic Indicators³

INDICATOR		YEAR
Average life expectancy at birth (total, female, male)	73, 77, 70	2008
Maternal mortality ratio (per 100,000 live births)	110	2005
Under five mortality rate (per 1,000 live births)	22	2008
Infant mortality rate (per 1,000 live births)	18	2008
Vaccination rates (% of DTP3 coverage)	98	2007
Undernourished (%)	6	2004
Adult (15-49 years) HIV prevalence (per 100,000)	454	2005
HIV antiretroviral therapy coverage (%)	78	2006
Tuberculosis prevalence (per 100,000)	55	2006
DOTS coverage (%)	75	2007
Malaria cases (per 1,000)	7.3	2006
Government expenditure on health as a % of total government expenditure	6.0	2008
Government expenditure on health per capita (international dollar, USD)	398, 318	2008
Total health expenditure per capita (international dollar, USD)	904, 722	2008
Physician density (per 10,000)	12	2000
Nursing and midwifery density (per 10,000)	38	2000
Number of hospital beds (per 10,000)	26	2002

Delivery

Following the creation of the SUS, public-sector efforts shifted from a hospital-centric care delivery model to an outpatient-focused model, with a special emphasis on primary care. About 25,000 of the 35,000 new health care facilities added between 1976 and 1999 were public, with 93% focusing on outpatient care. Yet, demand for health services outstripped supply, especially in rural areas. According to a Pan American Health Organization survey, 58% of Brazilian respondents reported dissatisfaction with their country's health system.⁵

In 2001 Brazil had 1.2 doctors and 3.8 nurses per 1,000 people, but physician density in the urban Southeast was twice that of the North and Northeast.^{4,13} Most public hospitals were small and overcrowded. Staff was underpaid, and accountability for quality and efficiency was generally poor.¹⁴ Still, public hospitals tended to be better equipped than private hospitals for complicated treatment. As a result, people

³ This data was comprised from the following sources: WHO, UNICEF, UN.

⁴ In comparison, Sweden in 2002 had 3 physicians and 10.2 nurses per 1,000 people.

with private insurance tended to return to the public system to receive free treatment for complex conditions such as cancer and AIDS.

In 1995 the government launched the *Programa Saúde da Família* (PSF; Family Health Program) to bring primary health care services closer to the people via home visits, particularly for residents of rural areas and urban slums. By 2009 PSF had become the backbone of Brazil's primary care system. Each PSF team included a general practitioner, nurse, auxiliary nurse, and four community health workers assigned to cover about 1,000 families. Teams made home visits to identify health needs, encourage visits to antenatal care and well-baby clinics, and promote medication compliance. In 2005 more than 20,000 PSF teams cared for 73 million people in 4,800 cities, or roughly 40% of the population.⁵ The PSF was credited for rapid improvements in childhood vaccination rates and falling infant mortality.¹⁵ The national PSF package did not require HIV prevention, education, or condom distribution. Some programs voluntarily included those services. Emphasizing the importance of the program's outreach component and use of community health workers, one PSF director said, "Some of the areas are so remote or in *favelas* so dangerous, that the NGOs [non-governmental organizations] don't go there. Even the mail doesn't go, but the Family Health Program goes."

HIV/AIDS in Brazil

Epidemiology

Brazil's first AIDS cases were identified in São Paulo in 1982 among gay men. During the 1980s the SUS was still in its infancy and not operating nationally. The limited epidemiological surveillance infrastructure made it difficult to track new HIV cases. The MOH estimated that between 1987 and 1989, new AIDS cases more than tripled from 2,600 to 9,000. The vast majority were among upper-middle-class men having sex with men (MSM) who lived along the Rio de Janeiro and São Paulo corridor.¹⁶

By 1990 AIDS had been diagnosed in hemophiliacs, heterosexuals, blood transfusion recipients, and newborns. The majority of new cases were found in injecting drug users (IDUs) in the urban South and gay and bisexual men in the urban Southeast.¹⁷ In the early 1990s Brazil's AIDS epidemic was increasing at the same rate as South Africa's. Cumulative AIDS cases doubled between 1990 and 1992 from 25,000 to 51,000.¹⁸ In the early 1990s World Bank analysts predicted that by 2000 1.2 million Brazilians would be infected.

By 2009, however, national HIV prevalence in the adult population (aged 15-49) was estimated at 0.6%, or 630,000 total people. In comparison, South Africa's adult HIV prevalence was 18% with an estimated 5.7 million infections.¹⁹ Roughly 33,000 new AIDS cases were diagnosed annually. The HIV incidence rate was unknown. The 11,000 people who died from AIDS represented 0.01% of all deaths.²⁰ The 15% reduction in incidence between 1997 and 2007 was driven largely by declining incidence of new AIDS cases in São Paulo and other large cities, where 85% of total AIDS cases were reported. In the same decade, however, AIDS incidence in small cities nearly doubled from 4.4 to 8.2 per 100,000 people (see **Exhibits 3 and 4** for AIDS epidemiology tables).¹⁸

Sexual intercourse was the mode of transmission for 97% of cases. People ages 25 to 39 were most likely to be infected, though AIDS remained concentrated in high-risk groups. The MSM and male IDU populations were most at risk, with incidence rates 15 times higher than the general population.²⁰ Infection rates were increasing fastest, however, among women and poor people in small towns.¹⁸ Brazilian AIDS officials referred to these trends as the "feminization," "pauperization," and "ruralization" of the epidemic.

The 1980s Early Response

Like other parts of the world, HIV carried a heavy stigma in Brazil. HIV was often referred to publicly as the “gay cancer” or “gay plague.” *Sanatarista* activists adopted AIDS as a human rights cause and joined forces with gay rights activists to demand a government response. Brazil’s health sector had never experienced such fervent civil society mobilization like what developed around AIDS.^{16,21} The state of São Paulo created the nation’s first AIDS control program in 1983. The São Paulo AIDS program worked with the many newly formed NGOs caring for people living with HIV/AIDS (PLWHA) to deliver prevention messages and distribute condoms. By the time the MOH created the National AIDS Program (NAP) in 1985, 11 of Brazil’s 26 states already had AIDS programs (see **Exhibit 5** for AIDS timeline).²²

The early AIDS programs were developed as an emergency response. Leaders moved quickly and learned as they went. “There wasn’t knowledge about what to do or how to deal with the problem,” recalled Dr. Pedro Chequer, the Joint United Nations Program on HIV/AIDS representative in Brazil and former NAP director. The MOH created the National AIDS Commission (CNAIDS) in 1985 to guide the response with scientific, technical, and political advice and support. Committee members came from civil society, government, and academia. They sought technical assistance from public health experts in the United States to control Brazil’s donated blood supply, establish AIDS diagnostic criteria, and develop the national laboratory and surveillance systems. The National AIDS Commission also became an important vehicle for “social control,” or public participation.

Foundations for Prevention

The São Paulo State AIDS Program remained the hub of Brazil’s HIV response throughout the 1990s. There, a sophisticated civil society relentlessly pushed the government to expand treatment and prevention services. Building on São Paulo’s example, in 1992 the NAP director worked with civil society leaders to secure a World Bank loan to support AIDS-related projects.¹⁴ The five-year, USD 250 million project called AIDS I took effect in 1994 and supported a massive expansion of prevention services targeting high-risk populations. Recognizing the government’s limitations in reaching marginalized populations, the NAP contracted directly with NGOs nationwide to deliver prevention services. In this way, the NAP bypassed more conservative state and local governments to fund controversial programs including: sex worker education and empowerment; needle exchange programs (NEP) for drug users; gay pride parades; and condom distribution and awareness campaigns during Brazil’s famous *carnaval*, a week-long springtime celebration associated with partying and sexual liberation that attracted thousands of domestic and international tourists. The influx of new AIDS money fueled a rapid expansion of AIDS-related NGOs and CSOs from fewer than 50 in the 1980s to more than 500 by 2000.²³ Civil society activists developed sophisticated and powerful networks and lobbies to advance AIDS and human rights issues. This was especially true for gay rights networks in major cities.

Two additional World Bank loan projects, AIDS II and AIDS III, further supported Brazil’s AIDS programs throughout the 1990s and 2000s (see **Exhibit 6** for overview of AIDS I-III). They resembled the AIDS I approach by funding prevention services through NGOs but placed greater emphasis on expanding program infrastructure and improving surveillance and monitoring and evaluation (M&E).

Treatment

In 1995 annual AIDS deaths in Brazil reached an all-time high of 15,150.¹⁸ In advanced-economy settings, highly active antiretroviral therapy (HAART) had proven effective at increasing AIDS survival, but only São Paulo and a few other Brazilian states were providing HAART free to all patients. Non-

governmental organizations advocated for universal access to HAART based on the nation's constitutional right to health care. This argument allowed PLWHA to take the government to court for failing to provide antiretroviral drugs (ARVs) and treatment for opportunistic infections. The court rulings in PLWHA's favor, coupled with ongoing activism, paved the way for a 1996 federal law that guaranteed the provision of ARVs to all AIDS patients meeting the national treatment criteria.⁵ Many international organizations, including the World Bank, cautioned Brazil against such a law, given the country's limited resources.⁹ Rejecting those arguments, Brazil became the first developing nation to provide free, universal AIDS treatment.¹⁶

All care and treatment was free through SUS and provided at specialized HIV outpatient health centers and infectious disease hospitals. The NAP oversaw a national laboratory system and the antiretroviral (ARV) supply chain – from price negotiation to distribution and monitoring. Municipalities and states managed most health service delivery. Antiretroviral costs came out of the NAP budget, but nearly all other care and treatment costs came out of the SUS budgets at various levels.

Civil society activists continued demanding the newest AIDS drugs available. These costly, imported drugs consumed an increasing portion of the nation's AIDS budget. In 2001 Brazil recruited support from other developing countries and launched an international campaign for affordable medicines, speaking publicly against multinational pharmaceutical companies and spending millions on advertising space in major US newspapers that called for universal AIDS treatment as a human right. Between 2001 and 2007 Brazil started legal proceedings three times to break an international trade agreement by manufacturing or purchasing generic versions of the most costly imported ARVs. Each time, Brazil backed down after drug manufacturers reduced their prices.²⁴ By 2006 nearly 80% of the USD 500 million Brazil spent on ARVs went toward imported drugs. Then, in 2007 after negotiations broke down, the world took notice when Brazil's President Lula broke the patent on Merck's drug efavirenz. Lula issued a compulsory license to produce the drug domestically, saving the MOH an estimated USD 30 million a year. Lula was quoted by the international media saying, "Between our trade and our health, we have chosen to look after our health."²⁵

Leadership

Many activists who fought for a human-rights-based approach to AIDS rose to leadership positions within NGO and government AIDS programs. Many others went into academia. Key people working on AIDS issues tended to rotate between positions in academia, civil society, and government. The São Paulo State AIDS Program, for example, had only three directors in three decades. The first two directors left to lead the NAP and then went onto work with the World Health Organization (WHO). Strong civil society activism in São Paulo guaranteed that the NAP would be funded annually and protected administrators and projects from capricious politics around elections. This leadership stability reinforced the NAP's unified vision and was central to its success, said Maria Clara Gianna, São Paulo State AIDS Program director in 2009. Similarly, the NAP leaders earned political protection for their projects and budgets. That was not the case, however, in many cities and states with weaker civil society. Pedro Chequer attributed this political capital to years of continuous good results based on sound science and hard work:

Since the very beginning, people in the National AIDS Program have been committed to a cause and not just to implement bureaucratically a national public health policy. They work very hard. They work longer than eight hours a day. They work weekends. They are always online to respond. This is quite different from the normal public health system in Brazil. The AIDS response is different because of that.

⁵ Individuals needing antiretroviral therapy were classified as having T-CD4 cell counts of 200/mm³ or lower.

Measurement and Reporting

With each World Bank project, the NAP funded epidemiological research and improved its M&E systems. However, collecting reliable, timely data and using it to guide decision making remained the biggest weakness among AIDS programs at all levels but especially at the municipal level. The national M&E system included the following efforts at the national, sub-national, and service delivery levels: routine program monitoring, surveillance and surveys, and evaluation research. While needing improvement, the M&E system for the AIDS program was arguably the strongest of all health programs in Brazil.

Publicly reported AIDS cases and deaths provided the basis for Brazil's epidemiological data. HIV incidence data was not collected systematically. A World Bank report on Brazil commented, "A system that relies only on AIDS case reporting has very limited utility for real-time planning and evaluation of prevention programs that aim to reduce HIV transmission."²⁶ Switching to HIV reporting was proposed several times, but never adopted. The majority of states, especially the poorer ones in the North and Northeast, opposed rules that would impose new costs on their overburdened health systems.

In 2003 the NAP created a separate M&E unit and, using World Bank funding, developed MonitorAIDS together with the MOH, United States technical partners, and the National Health and Sciences Center. MonitorAIDS was a web-based system that assembled data from the MOH's five electronic information systems, various epidemiological surveys, and specific studies. Its purpose was to inform program policy and implementation, as well as promote transparency. Ninety indicators were reported from three areas: 1) external context, including socioeconomic and demographic indicators such as population age distribution, poverty index, and available health services; 2) program-related indicators to measure outputs and results, such as national program expenditures, rapid testing distribution and rates, HIV knowledge, and condom use; and 3) morbidity and mortality indicators, including AIDS incidence, mortality rates, vertical transmission rates, and syphilis prevalence by state.

MonitorAIDS was a marked advancement to standardize and consolidate AIDS-related information into a single public space, but it was not entirely user-friendly, especially for program managers at the local level who had minimal or no real-time data to guide their decision making, said Francisco Iganio Bastos, a National Health and Sciences Center epidemiologist. He added, "Good data is necessary at every level for accountability and to make decisions about how to use resources most effectively to deliver prevention and treatment."

Decentralization

By 2001 every state and hundreds of cities had their own AIDS program funded mostly by local tax revenues. The NAP provided financial and technical assistance to all states and 150 cities. The NAP continued financing NGO projects directly from Brasilia. This allowed the NAP to fund its priorities, but monitoring hundreds of projects required significant staff time. Moreover, the Brasilia-based staff acknowledged that it did not always know best what was needed at the local level. Thus in 2001 the NAP leaders decided to embrace more deeply the SUS principle of decentralization and planned to transfer additional financial and administrative control to state and municipal health secretaries. According to Dr. Paulo Teixeira, NAP director in 2001 and the founding director of the São Paulo State AIDS Program, tightly controlling the National AIDS Program from Brasilia had been critical to scaling up in the early years, when the nation's health system was especially fragile, but now greater local control was necessary because "the Ministry of Health in Brasilia was too far away from the design, execution, and creation of the projects."

Between 2001 and 2003 Dr. Teixeira led a decentralization planning process that included workshops and meetings with numerous stakeholders, including academics, NGO leaders, and government officials

from all levels. All levels of the SUS adopted the decentralization policy in 2003, and the NAP began implementing it in 2004. The policy's three main goals were to: 1) shift the responsibility for financing and monitoring NGO projects to the states; 2) improve integration of HIV/AIDS programs into the SUS at all levels; and 3) build local program capacity and promote communication between local government and NGOs.

According to Teixeira, strengthening state and municipal programs required the NAP to forgo much control over priority setting and delivery, but that tradeoff was necessary for long-term sustainability. The NAP transferred 10% of its total budget to the 26 states, the federal district, and 480 municipalities (out of 5,500). These cities contained about 60% of the population and 90% of AIDS cases. Funds were allocated based on the area's AIDS prevalence, epidemic growth rate, and program strength. Each state and city was expected to match the transfer with its own funds, but local investment varied. The state of São Paulo matched 25% of its federal AIDS funding, for example, while Amazonas matched 10%.

Annual *Planos de Ações e Metas* (PAMs; goal and action plans) became the primary program management tool. The PAMs were results-based agreements describing how state and municipal programs would spend the federal transfer to meet their stated targets. The PAMs were supposed to be specific to individual community needs while incorporating national guidelines related to surveillance, prevention, treatment, and human rights. Each state and city had to annually update its PAM and "specific, measurable, appropriate, realistic, and temporal with an end date" (SMART) goals. A state program could receive a bonus of up to USD 100,000 for fulfilling various requirements, such as reaching 100% of targets aimed at high-risk groups, and transferring funds to NGOs in a competitive bidding process. Cities could receive bonuses up to USD 50,000 for meeting similar targets. Additionally, every two years a national innovation bonus was awarded.¹⁴

Between 2004 and 2009 the NAP continued implementing the decentralization process, also called the "incentives policy." Implementation occurred unevenly, with some states and cities embracing the additional financial autonomy and others struggling. According to a former NAP employee and NGO program director in Rio de Janeiro, the procedures for transferring money and policy responsibilities between the government levels were not fully developed before the new rules took effect in 2004, contributing to an already difficult budgetary process. She added that further training on executing the new policies and procedures could have smoothed the process. Additionally, because most NGOs worked directly with the NAP previously, they had weak relationships with state and local AIDS programs. Strengthening those local relationships and building trust would have aided transition. Teixeira commented on the mixed results:

The incentives policy did not succeed in all regions and all states, but it is still the best way to move forward. Where the process is adequately run, as in São Paulo and some other municipalities, you can see clearly the ownership of the local institutions. The particularities of the local region appear more clearly within the projects and plans that were built.

The National AIDS Department in 2009

In 2009 the NAP became the National Department of STD, AIDS and Viral Hepatitis ("National Department") within the MOH. The change represented further governmental institutionalization, but had little effect on daily operations. The National Department's mission was to "formulate and promote public policies for HIV, [sexually transmitted diseases] STDs and viral hepatitis in an ethical, efficient and participatory manner, based on human rights and the principles and guidelines of SUS." The National Department drafted and executed national policies and guidelines, managed national surveillance and

information systems, transferred resources to states and cities, provided technical training, and resolved local conflicts. While the National Department monitored local program implementation, it had little direct control over the design and delivery of services and programs at the state and city levels.

“If the cities or states do not agree with something, it’s very difficult to push the agenda,” said Simão, who worked for decades in municipal and state health secretaries. “Vertical, top-down decisions don’t work anymore. You have to talk with partners.”

Between 2007 and 2009 the National Department created goals and guidelines for preventing HIV among three key populations: women, including sex workers and transsexuals; gay men and other MSM; and indigenous people. States and cities were expected to incorporate these guidelines into annual PAMs. The guidelines applied relevant epidemiological data and evidenced-based prevention strategies and set specific activities and targets for each level of government. The process for creating and adopting the national prevention guidelines required input from CSOs and multiple rounds of negotiation with the local and state officials. The guidelines were then approved by the associations of city and state health secretaries, the health councils, and finally, CNAIDS before becoming official policy. Simão noted that such an inclusive approval process was slow and arduous, but that it was this inclusiveness that legitimized the guidelines and gave her staff political clout when enforcing their implementation at the state and municipal levels.

Organizational Structure

The National Department resided in a new, glass building alongside a row of MOH offices in Brasilia. The National Department was organized into nine programmatic units and seven support units (see **Exhibit 7** for organogram). Unit chiefs sat at desks amid the staff cubicles, not in closed-off offices. Low cubicle walls enabled easy, cross-office communication. The human rights and civil society relations unit was located next to the prevention unit, and the epidemiological surveillance team sat next to the M&E team. The National Department’s top floor held the International Center for Technical Cooperation on HIV/AIDS whose seven staff had assisted 20 countries in strengthening their AIDS programs since 2005.

All but 19 of the 219 staff members were hired as consultants through United Nations agencies. This employment structure allowed the National Department to pay staff more than formal civil servants and avoid the governmental hiring bureaucracy, but it also diminished long-term employment stability and contributed to staff turnover. In changing to a “Department,” managers planned to double the civil servants hired. More than half of National Department employees formerly worked in AIDS NGOs, including Deputy Director Eduardo Barbosa.²⁷

To expand national coverage and share program financing, AIDS officials coordinated their efforts with other governmental sectors. For example, representatives from other ministries, including human rights, education, and the military, sat on the CNAIDS. The secretary for human rights helped organize and fund prevention efforts around promotion events such as gay pride parades. The Special Department for Women’s Policies and three UN agencies helped launch the National Plan to Combat the Feminization of AIDS. The AIDS and Women’s Policies departments also partnered for the 2010 prevention campaign during *carnaval* that targeted young women with the slogan, “Condoms. Love, passion or just sex – always use one.”

The Budget

In 2009 the National Department’s budget was USD 845 million, representing 2.5% of the MOH budget. More than 75% of the National Department’s budget went to AIDS care and treatment, and most of that went to purchasing ARVs. Surveillance and prevention accounted for 13% of the budget, and 11% was

transferred to states and cities through the decentralization plan. Nearly all AIDS spending came from public coffers. According to Simão, negotiating affordable ARV prices was crucial to long-term sustainability. Average ARV spending per patient decreased by 25% between 2003 and 2009 while drug offerings increased (see **Exhibits 8-11** for budgets). Simão believed the National Department was adequately financed. State and local governments were responsible for the bulk of AIDS program funding and delivery. States and cities varied in their local support. In the city of São Paulo, federal dollars represented just 8% of its total AIDS spending.

Throughout 2009 the National Department negotiated a fourth World Bank project called AIDS-SUS to take effect in 2010. It focused on strengthening the health system and improving governance at all levels (see **Exhibit 12** for overview of AIDS-SUS). The MOH financed all but USD 67 million of the USD 200-million project. Money no longer was the primary reason for working with the bank; the National Department valued the third-party monitoring: “They keep us organized,” Dr. Simão said, “They are very picky.”

National Prevention Policy

The HIV prevention and control policy consisted of three integrated activity streams: 1) guaranteeing universal access to free care and ARV treatment; 2) scaling up access to diagnostics and prevention; and 3) maintaining a proactive relationship with an independent civil society. Simão considered all departmental work to be contributing to prevention, but a 20-person prevention team was primarily responsible for coordinating prevention efforts, including distributing condoms, education materials, and rapid HIV tests, as well as generating demand for such services through mass media and education campaigns. The prevention unit also focused on efforts to reduce vulnerability among PLWHA, sex workers, gay men and other MSM, drug users, prisoners, women, transvestites, black and indigenous people, and youth (see **Exhibit 13** for examples of interventions with high-risk groups).

The prevention unit was organized into three focus areas: 1) integrating prevention services into the public health care system; 2) targeting services for vulnerable groups; and 3) managing procurement and distribution of prevention materials, such as condoms, lubricant, and education pamphlets. The prevention unit’s assistant manager described their philosophy:

We see prevention as an extension of the human right to health care. We are trying to go a little more forward by insisting that accessing anything you need to be able to prevent yourself from HIV or an STD is a right. If you need condoms, they need to be where you can get them. If you need information, you have the right to have it. But we know that knowledge is not enough to change behaviors, and so we ask what else is necessary? We had big advances in prevention in Brazil for many years, but we need to do more, especially for vulnerable groups.

Testing and Treatment

Simão dismissed criticism that Brazil prioritized treatment at the expense of prevention; to her, the two were inseparable. “If there are no ARVs,” she said, “the rest of what we are doing goes down the drain. We have to do everything well.” She continued: “From a medical background, I don’t believe any prevention program is successful if it doesn’t cover universal access to treatment because it doesn’t have legitimacy. The heart of our response is universal access to treatment because we can relate everything to it; we can talk about early diagnoses because you’re going to treat them.”

The National Department was responsible for ARV purchasing, setting treatment standards and guidelines, accrediting facilities, and maintaining national laboratory and drug tracking information systems. The state and municipal health secretaries were responsible for distributing and monitoring ARV

therapy. Using the National Medication Logistics Control System to track all patients on treatment, the National Department estimated that 95% (about 190,000) of diagnosed AIDS patients needing ARV treatment received it. Most AIDS treatment was provided at the nation's 625 specialized outpatient AIDS facilities. Patients received their medications from designated pharmacies. These facilities were concentrated in urban areas; the Southeast had 320 ARV dispensing sites, whereas the expansive North had 29.¹⁶ All services were free through SUS, but as Simão described in a 2007 *AIDS* journal article, barriers to care remained: "Even with free access to outpatient facilities, laboratories, and to a fairly functional distribution pipeline, despite the continental size of the country, the expansion of the epidemic to small towns and to destitute individuals means that many patients cannot access medical care at distribution points because of lack of money for transportation."²⁴

In 2009 AIDS patients had access to 19 different ARVs available in 32 different combinations, of which 13 were produced in Brazil and 19 were imported.²⁸ The latter accounted for 70% of ARV costs. Simão spent the majority of her time managing ARV logistics, including price negotiation with international drug manufacturers.

The National Department's prevention team developed materials to sensitize health care providers to the needs of vulnerable populations and discuss prevention with HIV-positive people. The prevention unit also worked with states and cities to increase rates of HIV testing, particularly in primary care for pregnant women. Two-thirds of all HIV testing in Brazil was done in the public health system. Evidence suggested testing rates were insufficient; 44% of AIDS patients were diagnosed after they had symptoms of immune deficiency, and 29% were so ill that they died at the beginning of treatment.²⁰ Outside the primary care system, 384 testing and counseling centers (TCCs) nationwide offered rapid and conventional HIV and STD tests and voluntary counseling and testing. The TCCs were concentrated in cities with medium to high AIDS incidence, and cities with TCCs had testing rates twice as high as those without. One city in São Paulo state became a national model for offering HIV testing catered to different client populations. It offered testing at primary health centers primarily for women; it reached gay men and transvestites through the TCCs; and a mobile clinic brought HIV testing to people in rural areas.

The National Department had been working to increase the use of rapid HIV testing since the national protocol was adopted in 2005. The availability of rapid tests was essential to improve the prevention of mother to child transmission (PMTCT). Rapid testing required no laboratory equipment, making it the ideal method for isolated areas. Results were ready in less than 30 minutes, allowing for immediate counseling and referral. Working with the US Centers for Disease Control and Prevention's Global AIDS Program (CDC-GAP), the National Department trained states' lead agencies to train their health workforce in using rapid tests. The process worked smoothly in well-organized states with sufficient human resources, but not in others. The National Department provided technical assistance and additional funding to help states strengthen their rapid test supply chains to avoid stockouts.

Condoms

The National Department's principal method for containing the spread of HIV was promoting condom use. Brazil was the world's largest condom buyer. In 2007 the MOH purchased 1 billion male condoms, 8 million female condoms, and 15 million units of lubricant for distribution to states and NGOs.¹⁴ In 2009 the National Department distributed a record 465.2 million male condoms to states and NGOs. States distributed their supplies to cities and NGOs to hand out at HIV counseling and testing sites, health clinics, schools, and other venues. São Paulo state alone distributed 8 million condoms per month.²⁹ Private-sector condom sales also had increased steadily since 1992 to reach 422 million in 2008. A 2002 national law

allowed for the sale of condoms at any commercial outlet. In 2009 a pack of three condoms cost about USD 1.³⁰

Survey data indicated nearly all Brazilians knew condoms could prevent transmission of STDs and HIV, and yet, national knowledge and behavior surveys showed only half of people consistently used them. “We’ve reached a saturation point of condom promotion in the way we have been doing it,” a prevention unit employee said. “For the first time in 20 years, we have a trend in the decline in use of condoms. This is a huge challenge. ... We had big advances in prevention in Brazil for many years. Now we are at a point that this is good, but we need to do more, especially for vulnerable groups.”

Communication and Education Campaigns

The National Department worked with the Ministry of Education to develop and implement a national school-based sexual health and STD/HIV prevention curriculum. In 2009, 7% of schools distributed condoms, and 90% of secondary schools nationwide had some form of STD and HIV prevention program.²⁸ Roughly 20% had adopted the expanded curriculum created in 2007, which was announced by President Lula and funded by the Ministry of Education. According to Simão, “This was the first time in my professional life when the Ministry of Education took money from its budget and put it into a health program.”

The National Department sponsored two annual, national mass media prevention campaigns on World AIDS Day in December and during *carnaval*. Civil society groups, however, complained that all government levels were not doing enough mass media communication campaigns. Chequer echoed their criticism. Instead of two campaigns every year, he suggested, there should be at least five -- one tailored to each diverse region in the country. “There is no universal access to prevention yet,” he said. “Visit Amazonas, for example, or very poor areas where there is lack of information.” Simão disagreed. “We don’t think lack of information among the general population is the big problem in Brazil right now,” she said. “We are trying to focus our prevention efforts on the populations most at risk.”

Monitoring and Evaluation

Three units in the National Department collected data and conducted M&E: the M&E unit, the surveillance unit, and the research and development (R&D) unit. It was unclear which unit led the efforts and was responsible for developing a long-term strategy. Five M&E regional centers for excellence were established in 2005 to provide technical assistance at the local level, but three lost their funding once states were supposed to take over their maintenance. The National Department wanted to build a data-driven culture at the local health system level and among civil society, but this was a constant struggle impeded by high employee turnover at all levels. The World Bank reported in 2009 that despite significant progress, previous M&E activities were only moderately successful at gathering comprehensive data to guide program decisions. Baseline data was based on small, geographically limited studies, and data on hard-to-reach groups was especially poor and sparse. In 2009 the National Department’s M&E unit worked with university researchers to complete 10 studies on high-risk groups to form the first national baselines for MSM, IDUs, and sex workers.

The National Department identified three main issues to address under the fourth World Bank project: 1) improve understanding and ownership of results-based management, especially at the state and local levels; 2) further decentralize M&E training; and 3) improve the link between activities and financial monitoring using the PAM monitoring system. Addressing these issues would require additional human

resources, better quality data collection, and improved data dissemination to the local level for decision making.

Decentralization in 2009

Since 2004, the National Department had monitored the decentralization policy implementation through a web-based reporting system that was made available to the public. The monitoring system's goals were threefold: 1) to generate sufficient data to inform the annual PAM planning process and key program decisions; 2) to ensure transparency in the use of financial resources and health managers' ability to use the money to implement the local response; and 3) to monitor implementation of agreements made between the SUS at the municipal, state, and national level regarding the availability of condoms and drugs for STDs and opportunistic infections.

The web-based monitoring system allowed citizens to see the PAMs and the states' and cities' progress against them (see **Exhibit 14** for M&E indicators). In 2007 the system recorded that 75% of states and cities had achieved at least 75% of their targets.¹⁴ By the end of 2009, the city of São Paulo had achieved 99% of its targets. The city's AIDS program coordinator commented on why the decentralization policy was necessary:

The National Department works with numbers and statistics, but the city works with the people, and we know the demands of the people. A single model of prevention or treatment cannot meet the needs of one city. São Paulo is a large city, and the populations in the different neighborhoods have different priorities. In the city center, homelessness and drug use are the main problems. Then there are areas with many sex workers, and we can target their needs.

In 2009 the NAP transferred about USD 90 million to the state and municipal programs.³¹ In some places, the money sat unspent in bank accounts. A primary problem was failing to transfer the 10% of federal AIDS funding to NGOs working with vulnerable populations. Aside from the difficult politics, some states and cities lacked organized health accounts and sufficient employees with accounting experience to execute funding transfers. Additionally, Brazil's complicated budgeting laws made contracting with NGOs an enormous bureaucratic hurdle for many states. Each government budget required approval by the corresponding legislative body, meaning that altering a budget midway through a fiscal year was time consuming, if not impossible. Other laws limited how much a budget could increase from year to year and what percent could be spent on human resources. A health policy professor said, "There is so much red tape and conditions on spending money that were designed to battle the history of corruption, but what it creates is a very difficult system that hampers managers' ability to do their jobs."

Considering these challenges along with the political difficulties of stopping fund transfers or taking money back from underperforming states, the National Department chose not to penalize states and cities. Instead, the planning and budget division provided technical assistance to help struggling programs improve their budget planning and contracting policies. First they offered assistance via telephone or video conferencing and then, if necessary, sent consultants to assist in person. The National Department also sponsored budgeting and planning workshops for state and municipal employees.

Another way national officials influenced local programs was by calling attention to programs that were uncooperative. On World AIDS Day 2009, for example, Simão held a press conference to announce where AIDS cases were increasing fastest and how those states and cities had spent their federal AIDS money. According to Barbosa, "She publicly compared São Paulo's performance to Rio de Janeiro and Rio Grande do Sul, knowing those governments would have to explain to the media why they had not spent millions of federal money to implement prevention programs while their AIDS cases were increasing."

Rio de Janeiro

By December 2009 the city of Rio de Janeiro had achieved only 53% of its PAM targets and was 53 months behind on spending its federal AIDS money. Millions of federal funds intended for AIDS programs and NGOs sat paralyzed in a bank account.³² Da Vida, a Rio de Janeiro NGO supporting sex workers, previously received funding and condoms for its HIV prevention and outreach programs directly from the National Department. Like most NGOs in Rio de Janeiro, Da Vida had not received public support since 2005, when the state became responsible for funding NGOs. Da Vida's monthly condom supply fell from 20,000 to 5,000 because the state failed to match the federal supply.

Harm reduction programs for IDUs in Rio de Janeiro also suffered under the decentralization policy. The city's needle-exchange programs had worked well for about 10 years, but the decentralization policy was described as "the beginning of the end" for them. In addition to the bureaucratic problems of managing the new funding flows, Rio de Janeiro political leaders did not support needle-exchange programs.

Rio Grande do Sul

Brazil's southernmost state, Rio Grande do Sul, and its capital city, Porto Alegre, were among the country's richest and most developed regions. In 2009 they also had the highest rate of new AIDS cases in the country. Porto Alegre's incidence rate was four times the rate in the city of São Paulo.¹⁸ Throughout the 1990s the southern state's AIDS programs and CSOs were considered among the best in the country, particularly for IDU harm reduction. But, as of December 2009 Rio Grande do Sul and Porto Alegre each had implemented only 70% of their PAM targets and were 23 months behind in spending their federal AIDS funding.³² The state's top AIDS coordinator position had been vacant for six months, and millions of federal AIDS funds went unspent. By 2009 most AIDS NGOs had largely deteriorated due to insufficient funding. Many lacked capacity to continue providing services or to publicly protest the government's neglect.

NGO Frustration

Veriano Terto Jr., director of the respected national NGO, ABIA, along with other civil society leaders, was losing patience with this decentralized approach. Terto favored returning to the system where the National Department directly funded civil society projects. The National Department was reluctant to do this because it contradicted the SUS principle of decentralization and instead would transfer accountability for the NGO projects back to the National Department while states and cities received the benefits. Another solution NGOs proposed was to take back unspent money from underperforming states and redistribute it to states meeting their targets. While he could not prove it, Terto believed Rio Grande do Sul's increasing AIDS incidence was related to neglect of its HIV/AIDS programs. Terto described his waning patience:

Many of the initiatives that have been developed in the last 15 to 20 years, such as the harm reduction programs in the South, are being neglected, abandoned, and we are losing them. For NGOs, things worked better before decentralization. The federal government made announcements of projects and issues to be funded, we would send the projects to Brasilia and there was a competitive process for funding. Then it would be approved or not. At the end of one year or two years, when the project was over, there was an accountability process. We listen to health ministers saying that decentralization will be a good thing and a good solution for health management, but sometimes decentralization is not the answer because decentralization is not a technical issue. It's a political one.

Strengthening Civil Society

Since it no longer oversaw all NGO contracts, the National Department's human rights and civil society unit concentrated its efforts in places struggling most under decentralization. These tended to be areas where civil society advocacy was weak and encountering government resistance. A human rights and civil society unit employee said, "What this unit sees is that where civil society is well organized, like the state of São Paulo, everything happens efficiently, and the public administrators that aren't efficient don't stay in office. That doesn't happen where civil society isn't well organized."

Most of the human rights and civil society unit's 13 employees had previously worked at AIDS NGOs. Their responsibilities included coordinating civil society's representation on national committees and supporting NGO networks through which more mature NGOs linked with weaker ones to share knowledge and build political and technical capacity. Staff worked to create opportunities for civil society participation in the state and municipal policy process and managed relationships with the members of Congress who advocated for AIDS and human rights issues. A staff lawyer provided legal assistance to NGOs and consultation to Brazil's Supreme Court regarding human rights and HIV issues. The national employees were careful not to infringe on the governing autonomy of the sub-national levels. Thus, change often occurred more slowly than they hoped. National Department deputy director Barbosa championed the work supporting civil society. He believed it was necessary to push AIDS onto local political agendas and improve government accountability. Barbosa spent only 10 days per month at his Brasilia office and the rest of his time traveling the country and meeting with civil society and municipal AIDS program leaders. "The main focus of the visits is to try to listen to the population's demands and see what their needs are so we can help the local programs meet them," Barbosa said. "It's not always easy because there are political differences and struggles in these local areas."

Chequer believed the National Department staff should spend even more time outside Brasilia to strengthen NGOs in rural areas. "In Brazil, the NGOs are good about talking to the press about the national problems, but they aren't organized enough to put pressure on the local government," Chequer said. "More and more there is a need to have NGOs get organized and learn the political process. Locally, there is not enough social pressure in terms of implementing activities and using the money correctly."

Given its reliance on public funding, CSO's independence from the government was a source of ongoing debate. Non-governmental organization leaders recognized the conflict of interest inherent in relying heavily on government funding, but by 2009 few international donors funded the country's AIDS projects. By World Bank standards, Brazil had reached upper-middle-income status and was already considered a success by many.

Progress

A 2008 survey found that 97% of Brazilians knew HIV could be transmitted through sex and that condoms could protect against transmission. The national survey results also showed that 46% of Brazilians reported using condoms when having sex with a casual partner, up from 9% in 1989.²⁰ In 2009, 47% of female sex workers received assistance from prevention programs. Of those, 77% received free condoms, and 57% knew where they could take a free HIV test. Half of sex workers reported always using condoms with all clients. Among IDUs, 40% reported having access to prevention programs, 49% knew where they could take a free HIV test, and 28% received free condoms. Half of IDUs reported not sharing syringes in the previous 12 months, and 70% reported using a condom the last time they had sex with a casual partner.²⁸

About one-third of HIV patients started receiving health services when their CD4 counts were below 200, indicating advanced disease, but HIV testing and mortality rates varied by region. Distribution of rapid tests had increased from 530,000 in 2005 to 1.75 million in 2008. In 2008, 41% of people over age 14 in the Southeast region had ever been tested for HIV as compared to 27% in the Northeast.²⁰ The median survival time among AIDS patients in the 1980s was five months. Among those diagnosed in 1996, it was 58 months, and by 2009, average survival rates were comparable to developed countries at 108 months.^{33,14} The risk of dying within a year of an AIDS diagnosis in the North and Northeast, however, was three times higher than the Southeast.¹⁴

Nationally, 62% of pregnant women were tested for HIV during antenatal visits in 2006, up from 52% in 2000. But 19% of mothers were never tested, and another 19% received only a rapid test at the time of labor. Testing rates varied from 85% in the South to 40% in the Northeast.¹⁴ Women in small cities were less likely (51%) to be tested than those living in large cities (71%). In 2007, 323 babies were infected with HIV from their mothers, down from a peak of 1,019 a decade earlier.¹⁸ The percentage of babies born positive, however, was twice as high in the North than the national average of 6.8%.²⁰

Between 1997 and 2007 the MOH estimated that access to HAART prevented 1.3 million hospitalizations, saving USD 1.1 billion. The average number of hospital admissions per patient per year in 1996 was 1.65. At that rate, the MOH had expected 1.6 million HIV/AIDS-related hospitalizations over the decade, but only 293,074 were registered.³⁴ The average AIDS-related hospital admission in 2007 was 17 days compared to 5.8 for all SUS hospital admissions.²⁰ Evidence suggested that resistance to first-line drugs was low in Brazil, indicating treatment adherence.²⁴

Looking to the Future

Every day Simão thought about her staff's efforts to guarantee that all 190,000 patients needing ARV treatment would receive it. She thought about what the National Department could do in the short and long term to improve patient care, prevent new HIV infections, and ultimately, ensure these efforts could be sustained indefinitely. She believed that effective HIV prevention in Brazil must target the populations most at risk, be decentralized, and work through the health system, but each of these areas presented challenges. The National Department was more progressive than many states and cities when it came to working with marginalized populations. How could Simão best push the HIV prevention agenda to protect and support the people with the highest risk of infection while respecting local government autonomy?

Strong civil society advocacy and NGO service provision had been the backbone to Brazil's HIV response. However, in 2009 many NGOs were nearing collapse and high-risk populations were being neglected in places where government had failed to support them. AIDS advocates were growing increasingly frustrated. Should the National Department continue providing technical assistance, or should it take stronger action in places failing to implement the decentralization policy?

Lastly, reducing mother-to-child HIV transmission and guaranteeing timely access to testing, treatment, and care depended on the strength of Brazil's primary health care system. How could Simão's department strengthen the health system amidst the vast inequities across such a massive country?

Appendix *Abbreviations*

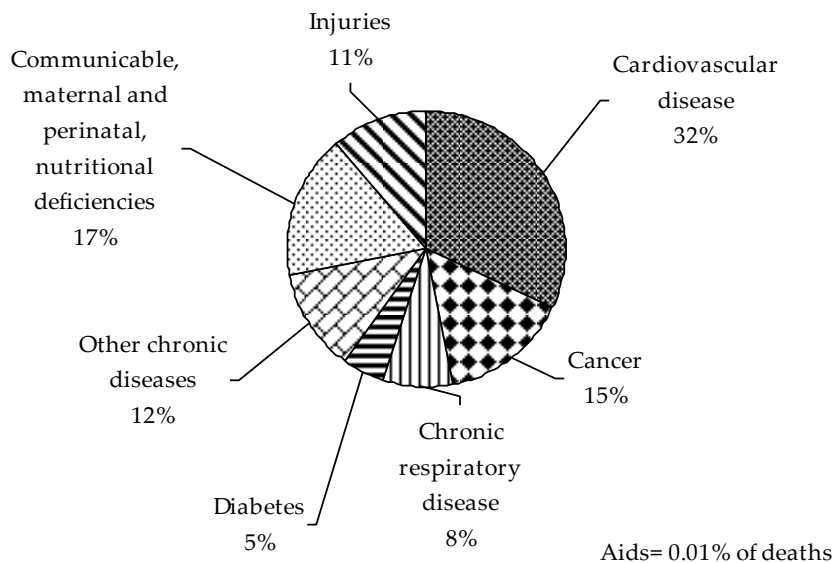
ARV	antiretroviral drugs
CNAIDS	National AIDS Commission
CSO	civil society organizations
DOTS	directly observed treatment short-course
DTP3	third dose of diphtheria toxoid, tetanus toxoid, and pertussis vaccine
GDP	gross domestic product
HAART	highly active antiretroviral therapy
IDU	injecting drug users
M&E	monitoring and evaluation
MOH	Ministry of Health
MSM	men having sex with men
NAP	National AIDS Program
NGO	non-governmental organizations
PAM	<i>Planos de Ações e Metas</i> (Goal and action plans)
PPP	purchasing power parity
PLWHA	people living with HIV/AIDS
PSF	<i>Programa Saúde da Família</i> (Family Health Program)
STD	sexually transmitted disease
SUS	<i>Sistema Único de Saúde</i> (Unified Health System)
TCC	testing and counseling centers (TCCs)
USD	United States' dollar

Exhibit 1 *Map of Brazil*



Source: Available in the public domain.

Exhibit 2 *Deaths by All Causes, 2005*



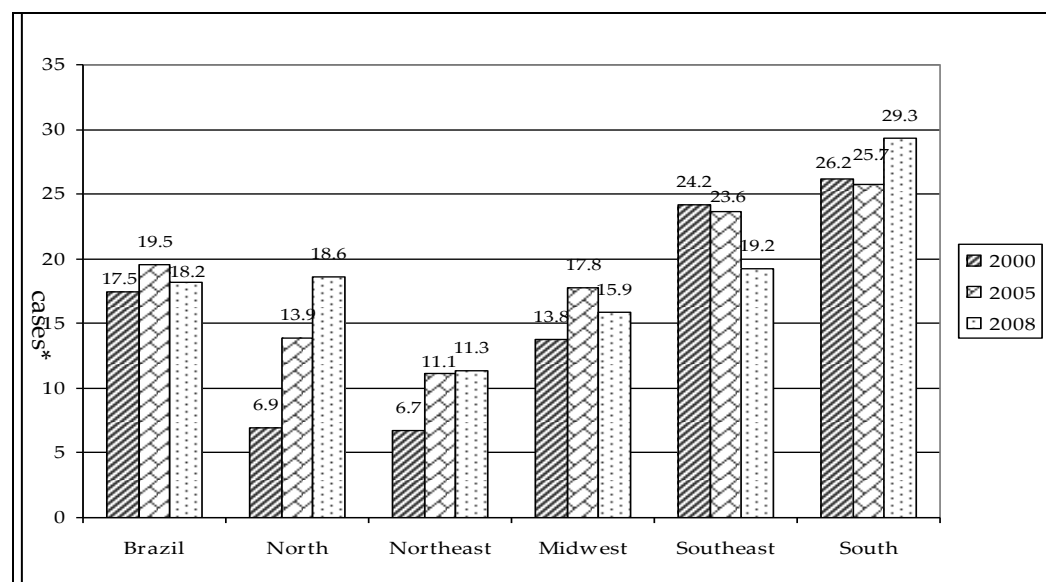
Source: World Health Organization.

Exhibit 3 *AIDS Epidemiological Indicators*

	1997	2009
Total adult HIV prevalence	0.6%	0.61%
AIDS incidence rate (per 100,000 people)	17.2	18.2
Male incidence rate (per 100,000 people)	23.4	22
Female incidence rate (per 100,000 people)	11.1	13.9
Male-Female ratio	2.1	1.8
New AIDS cases, annually	27,403	33,090
Aids deaths, annually	12,078	11,532
AIDS mortality rate (per 100,000 people)	7.6	6.1
Cases of vertical transmission	1,041	406
Portion of cases among MSM	22%	18%
Portion of cases among IDUs	22.6%	7.4%

Source: Brazilian National Department of STD, AIDS and Viral Hepatitis

Exhibit 4 *AIDS Incidence by Region in Brazil, 2000-2008**



Source: Brazilian National Department of STD, AIDS and Viral Hepatitis.

*per 100,000 population

Exhibit 5 *Timeline of Brazil's HIV/AIDS Response*

1982	Seven AIDS cases among gay men are diagnosed in São Paulo.
1983	São Paulo state health department establishes the nation's first AIDS program, requires mandatory reporting, and launches a public awareness campaign.
1984	Ten cases among hemophiliacs are diagnosed.
1985	Democratic elections end two decades of military rule. Eleven states have AIDS programs, and the Ministry of Health creates a national program.
1986-1990	Centralized National AIDS Program begins implementing programs.
1986	Brazilian national government requires mandatory reporting of AIDS cases. São Paulo state requires testing of blood supply. PAHO provides technical assistance.
1987	The National AIDS Program begins coordinating activities; 26 babies are diagnosed with HIV.
1988	Brazil adopts a new national constitution declaring "health as a basic human right," requiring the government to provide free health services. CNAIDS forms.
1989	<i>Previna</i> , a national prevention campaign, launches to target high-risk groups. Major national businesses and Armed Forces launch HIV prevention programs.
1990-1992	The National AIDS Program reaches a standstill. The health minister dismantled the program but was ousted after Brazil's president was impeached for corruption.
1990	São Paulo state launches a needle-exchange program.
1992	Brazil's fifth health minister in two years takes office and re-establishes the National AIDS Program with its former director. Several national laws are adopted to protect AIDS patients' civil rights and provide treatment. One study predicts 1.2 million Brazilians will be infected with HIV by 2000.
1994-2003	Three World Bank projects provide USD 750 million for HIV prevention and programs.
1993	Brazil begins producing its own AZT and eliminates tariffs and taxes on imported condoms.
1994	The National AIDS Program adopts harm reduction as an explicit policy. First World Bank loan funds are distributed, and a growing number of NGOs begin providing services.
1996	Congress passes a law providing universal access to antiretroviral therapy. Nationally, 600 NGOs are estimated to be working on AIDS issues.
1997	HIV surveillance system is revamped and national treatment protocols are adopted.
1998	Brazil experiences a financial crisis, but spending on HAART increases. USAID and United Nations Development Program launch strategic programs with USD 8.4 million and USD 2.5 million, respectively. World Bank contracts UNESCO and UNDCP to carry out activities for second phase of AIDS loan.
2003	The National AIDS Program expands its decentralization policies, giving states responsibility for funding local NGO projects and creating results-based management agreements with 480 cities and all 26 states.
2005	Brazil rejects USAID funding due to disagreement over prevention activities for sex workers.
2007	President Lula issues a compulsory license for Merck's drug efavirenz, allowing Brazil to make its own and purchase generic versions.
2009	The National AIDS Program becomes a department within the Ministry of Health.

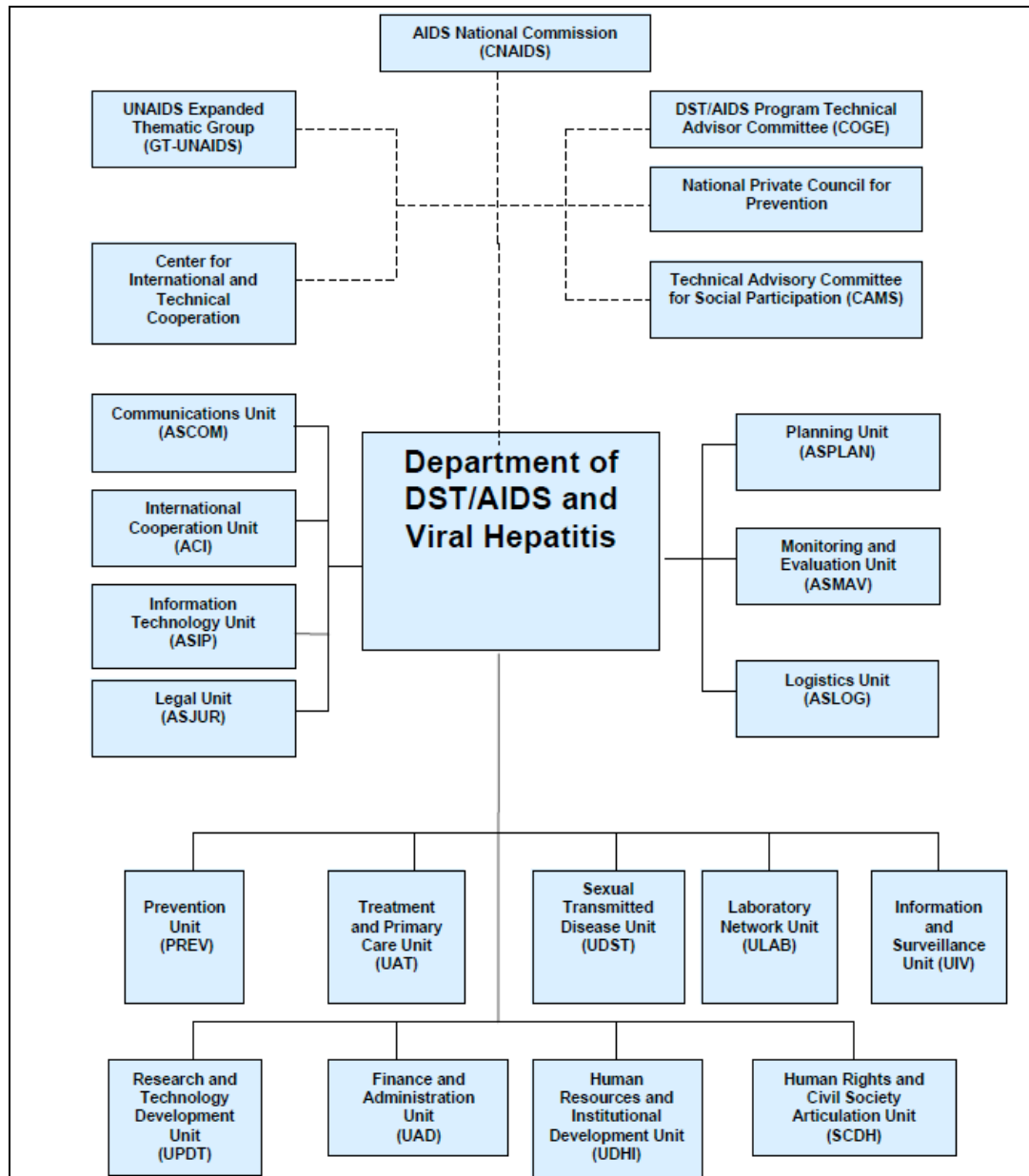
Source: Compiled by case writers from publicly available data sources.

Exhibit 6 *Summary of World Bank AIDS Projects*

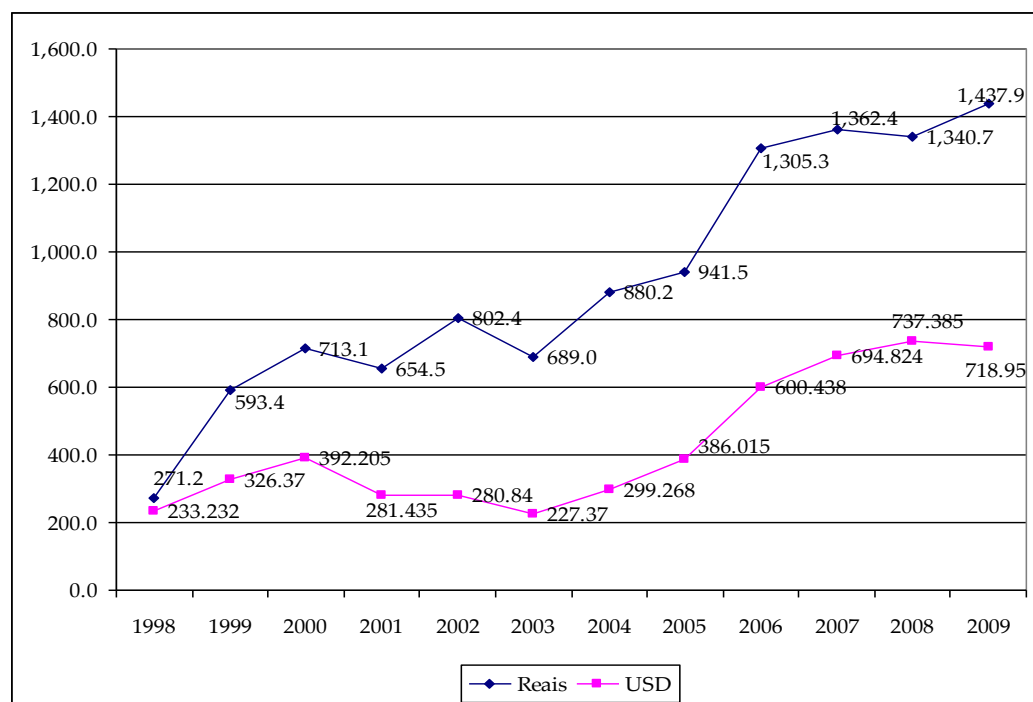
Project Name	Dates	Total Amount (USD, million)	Bank-funded portion (USD)
AIDS I	1993-1997	250	160 (64%)
AIDS II	1998-2003	300	165 (55%)
AIDS III	2004-2007	200	100 (50%)
AIDS-SUS	2010-2013	200	67 (33.5%)

Source: World Bank.

Exhibit 7 *National Department of STD, AIDS and Viral Hepatitis Organogram, 2009*



Source: Brazilian National Department of STD, AIDS and Viral Hepatitis.

Exhibit 8 National Department of STD, AIDS and Viral Hepatitis Budget, 1998-2009

*Reported in millions

Source: National Department of STD, AIDS and Viral Hepatitis Budget.

Exhibit 9 Brazilian Spending on ARVs, 2003-2009

Year	No. Patients	Spending on ARV/patient (USD)	ARV spending (as % of GNP)	ARV spending (as % of total MOH budget)
2003	139,868	1,377	0.038	1.92
2004	156,670	1,554	0.033	1.73
2005	164,547	1,750	0.031	1.63
2006	174,270	1,830	0.027	1.47
2007	180,640	1,767	0.025	1.30
2008	191,244	1,566	0.019	1.08
2009	197,000	1,435	0.020	1.03

Source: Brazilian Ministry of Health, 2009.

Exhibit 10 *National AIDS Categorical Spending in millions USD, 2006-2008*

	2006		2007**		2008	
		%		%		%
Prevention*	75.2	6.0	160.8	14.3	76.4	6.7
Care and treatment	1,034.1	83.2	860.2	76.3	956.4	83.9
Program management, e.g. M&E, planning, surveillance, laboratory infrastructure	55.9	4.5	38.6	3.4	42.9	3.8
Human resource incentives, e.g. staff development and training	12.1	1.0	16.9	1.5	15.7	1.4
Social protection and orphans	29.2	2.3	25.9	2.3	24.8	2.2
Creating an enabling environment, e.g. human rights promotion	31.4	2.5	14.2	1.3	20.2	1.8
Research	5.7	0.5	10.8	1.0	4.0	0.3
Total	1,243.4		1,127.3		1,140.3	

*Does not capture spending at the state and local levels.

**Spike in prevention spending due to purchase of 1 billion male condoms.

Source: Brazilian National Department of STD, AIDS and Viral Hepatitis Budget.

Exhibit 11 *National AIDS Prevention Spending in USD, 2006-2008*

	2006*	2007**	2008
Blood supply safety	695,045	1,250,520	1,080,340
Community Mobilization	7,063,584	10,324,440	10,092,046
Education programs for vulnerable populations	791,787	8,189,819	4,728,571
Female condom provision	2,496,895	6,321,585	-
IDUs	757,903	43,683	47,760
Male condom provision	-	67,991,988	167,497
Mass media communication	21,785,522	29,834,802	29,720,864
MSM	78,431	-	99,500
Other	21203112	3,705,315	2707773
People living with AIDS	59,388	1,422,791	-
Mother to child transmission	11,341,484	7,239,892	6,952,792
Prevention, diagnosis & treatment of STDs	2,882,840	3,579,523	4,418,474
Sex workers	55,676	-	35,820
Voluntary Testing & Counseling	5,401,381	17,436,693	14,579,160
Youth	537118	3,431,629	1788687
Prevention Total	75,150,165	160,772,680	76,419,285

*Receiving World Bank funds

**Completed purchase of 1 billion condoms

Source: UNAIDS.

Exhibit 12 *World Bank Brazil AIDS-SUS Project Components*

Component 1. Improve surveillance, prevention, and control of STDs and HIV/AIDS	
	Activities
Policy Formulation and Regulation	Develop policies, guidelines, and technical regulations for the health care network to better reach groups most at risk; improve the logistical system that provides condoms and drugs.
Surveillance	Improve behavioral and seroprevalence surveillance of HIV/AIDS and other STD, prioritizing groups most at risk and PLWHA.
Information Management	Further develop program M&E; coordinate epidemiological surveillance, R&D, and M&E; monitor and evaluate R&D; and develop tools and processes to make the information available to key stakeholders.
Research and Technology Innovation	Promote R&D in innovative, priority areas to better reach vulnerable populations and develop vaccines and other prevention products; develop cooperation between research institutes, private sector and development agencies; and assess technology.
Decentralized Results-based Management	Establish results-based financing of STD and HIV/AIDS programs in states, municipalities, and CSOs, on surveillance, M&E, prevention, treatment, and care.
Network Organization	Further organize a network of care integrating primary, secondary, and tertiary care to expand the provision and improve the quality of services in the areas of prevention, diagnosis, and treatment of STDs and HIV/AIDS, focusing on groups most at risk.
Transparency, Accountability, Social Control	Strengthen social participation in the formulation and control of policies for HIV/AIDS and other STDs, and increase transparency and visibility of program inputs, processes, activities, and results.
National and International Cooperation	Develop national and international networks to improve the national response, focusing on groups most at risk; integrate the efforts of the relevant health sub-sectors, especially those linked to surveillance, primary health care, and reproductive health, as well as public and private sectors and civil society; and increase South-South cooperation.
Component 2. Build decentralized governance and innovation capacity	
Surveillance	Mapping the epidemic and prevention activities
M&E	<ul style="list-style-type: none"> ◆ Annual independent verification agency ◆ Impact evaluation of interventions to decrease risk among groups most at risk ◆ Results-based financing ◆ Fiscal impact of the program, focusing on ART
Results-based Financing (PAMs)	<ul style="list-style-type: none"> ◆ Capacity-building in strategic planning, project management and M&E for National Department, state and city health secretaries, and CSOs ◆ Development of an output-based cost-accounting system for PAMs ◆ Performance incentives for state and municipal secretariats and CSOs, namely to focus on groups most at risk ◆ Individual grants for staff working with groups most at risk

Source: World Bank.

Exhibit 13 *Interventions with Most-at-Risk Groups*

Groups	Estimated population size	Prevalence	Behavioral intervention	Condoms	Needles and syringes	Rapid testing
People living with HIV/AIDS	630,000	100%	Positive Prevention Program implemented in all states	National distribution based on Needs Plan 33 million, 2009	Harm reduction in 19 services in 5 regions	NA
Gay and other MSM	1.6 million	7,2% n=602	Coverage based on National Plan	National distribution based on Needs Plan 122 million, 2007 45 million, 2009	NA	Pilot project in 2 metropolitan regions: Recife and Rio de Janeiro
Sex Workers	634,000	6,2% n=2712	Coverage of capital cities and metropolitan regions; and mining areas in the North	National coverage of capital cities and metropolitan regions. 82 million, 2009	NA	NA
Injection Drug Users	521,000	12%	Coverage of capital cities, metropolitan regions, and frontiers.	National coverage of capital cities and metropolitan regions. 13 million, 2009	Harm reduction with needle exchanges in states with high IDU: South - Southeast	NA
Prisoners	460,000	5.7% n=333 males	Coverage based on National Health Plan for prison system: 463 prisons	National distribution based on Needs Plan 27 million, 2009	National Health Plan for prison system includes harm reduction	National health plan for prison system includes diagnosis
Pregnant women	3 million	0.04% N=20,000	National Plan to Fight Feminization of the epidemic	National distribution based on Needs Plan	NA	Routine testing in the context of prenatal care
School children	NA	NA	Health and Prevention in schools	National distribution based on Needs Plan 47 million, 2008	NA	Testing awareness kit: <i>Do I need to be tested?</i> 300,000 kits

Source: AIDS-SUS World Bank Project Assessment, 2009.

Exhibit 14 *Decentralization Policy M&E Indicators*

Guideline Goal	Indicator	Who must comply
Improving the quality of public services offered to people with HIV/AIDS and other STDs.	<ul style="list-style-type: none"> ◆ Number of adult patients on ART per doctor. ◆ Number of pediatric patients on ART per doctor. ◆ Number of patients on ART and beds for AIDS patients. ◆ Number of ARV dispensing units. 	States and municipalities
Reduction of vertical transmission of HIV.	<ul style="list-style-type: none"> ◆ Proportion of pregnant women who received prenatal care and conducted tests for syphilis in the first and third trimesters of pregnancy. ◆ Incidence of congenital syphilis. 	States and municipalities States
Increased coverage of STD diagnosis and treatment.	<ul style="list-style-type: none"> ◆ Composite index related to STDs. 	Municipalities
Increased coverage of HIV diagnosis.	<ul style="list-style-type: none"> ◆ Estimated coverage of HIV testing. 	Municipalities
Increased coverage of prevention for vulnerable populations.	<ul style="list-style-type: none"> ◆ Number of MSM who participated in structured prevention interventions. ◆ Number of sex workers participating in structured prevention interventions. ◆ Number of transvestites / transgenders / transsexuals who participated in structured prevention interventions. ◆ Number of IDU participants in harm reduction programs. ◆ Number of other women vulnerable to HIV infection who participated in prevention interventions. ◆ Number of people living with HIV/AIDS who participated in prevention interventions. 	Municipalities
Reduction of stigma and discrimination.	<ul style="list-style-type: none"> ◆ Percentage of civil society organizations with approved projects focusing on issues of human rights, advocacy, and social control. 	States
Improved management and sustainability.	<ul style="list-style-type: none"> ◆ Ratio of local resources to federal transfer for HIV/AIDS and other STD programs. ◆ Number of AIDS civil society organizations in the municipality. 	States & municipalities States

Source: National Department of STD, AIDS and Viral Hepatitis.

References

1. CIA. World Fact Book: Brazil. 2010;Last updated Jan. 4, 2010. <https://www.cia.gov/library/publications/the-world-factbook/geos/br.html#>.
2. Brazil takes off. *The Economist*. Vol 2009.
3. Ravallion M. *A Comparative Perspective on Poverty Reduction in Brazil, China and India*: World Bank; October 2009.
4. World Bank. Key development data and statistics. 2008;Updated Feb. 5, 2009. www.worldbank.org. Accessed Feb. 10, 2010.
5. Pan American Health Organization. *Brazil - Health in the Americas 2007 - Volume II*: Pan American Health Organization;2007.
6. UNICEF. Brazil: Statistics. 2009. http://www.unicef.org/infobycountry/brazil_statistics.html. Accessed Feb. 10, 2010.
7. National STD and AIDS Programme. *UNGASS – Brazilian Response 2005-2007 Country Progress Report*. Brasilia: Brazilian Ministry of Health Surveillance Secretariat; 2008.
8. Ministry of Health. Health in Brazil 2007: An analysis of the Health Situation. 2008. http://portal.saude.gov.br/portal/arquivos/pdf/coletiva_saude_061008.pdf. Accessed March 4, 2010.
9. Berkman A, Garcia J, Munoz-Laboy M, Paiva V, Parker R. A critical analysis of the Brazilian response to HIV/AIDS: lessons learned for controlling and mitigating the epidemic in developing countries. *Am J Public Health*. Jul 2005;95(7):1162-1172.
10. Buss P, Gadelha P. Health care systems in transition: Brazil Part I: An outline of Brazil's health care system reforms. *J Public Health Med*. Sep 1996;18(3):289-295.
11. Interview with Kenneth Rochel de Camargo Jr. Rio de Janeiro. Dec. 13, 2010.
12. Cassio de Moraes J, Carrara P. Universal Health Care: closing the equity gap. *ReVista*. Vol Spring. 2007.
13. World Health Organization. World Health Statistics. 2009; <http://www.who.int/whosis/whostat/2009/en/index.html>. Accessed April 20, 2010.
14. World Bank. *Project appraisal document on a proposed loan in the amount of US\$67 million to the Federative Republic of Brazil*. Washington D.C. 2009.
15. Macinko J, Guanais FC, de Fatima M, de Souza M. Evaluation of the impact of the Family Health Program on infant mortality in Brazil, 1990-2002. *J Epidemiol Community Health*. Jan 2006;60(1):13-19.
16. Bastos FI, Nunn A, Hacker A, Malta M, Szwarcwald C. AIDS in Brazil: The Challenge and the Response. In: Celantano DD, Beyrer C, eds. *Public Health Aspects of HIV/AIDS in Low and Middle Income Countries*: Springer Science+Business Media, LLC; 2008:629-654.
17. Fonseca MG, Bastos FI. Twenty-five years of the AIDS epidemic in Brazil: principal epidemiological findings, 1980-2005. *Cad Saude Publica*. 2007;23 Suppl 3:S333-344.
18. Ministry of Health. *Boletim Epidemiológico*: Department of STD, AIDS and Viral Hepatitis; November 2009.
19. Shisana O, Jooste S, Mbelle N, Parker W, Zungu N, Pezi S. South African National HIV Prevalence, Incidence, Behaviour and Communication Survey, 2008. 2009. www.hsrbpress.ac.za.
20. MonitorAIDS. Updated Jan. 30, 2009. <http://sistemas.aids.gov.br/monitoraids/>. Accessed Feb. 17, 2010.
21. World Bank. *Implementation completion and results report on a loan in the amount of US \$100 million to the Federative Republic of Brazil for a third AIDS and STD control project*. 2008.
22. Parker RG. Civil society, political mobilization, and the impact of HIV scale-up on health systems in Brazil. *J Acquir Immune Defic Syndr*. Nov 2009;52 Suppl 1:S49-51.
23. Conner C. *Contracting nongovernmental organizations for HIV/AIDS: Brazil case study*: Partnership for Health Reform; March 2000.

24. Greco DB, Simao M. Brazilian policy of universal access to AIDS treatment: sustainability challenges and perspectives. *AIDS*. 2007;21(4):S37-S45.
25. Agence France Presse. Brazil's success in AIDS fight depends on cheap drugs. July 30, 2008. <http://afp.google.com/article/ALeqM5ieT0IHsJgOHEPjVBfKcZg75IOCRQ>. Accessed March 8, 2010.
26. Beyrer C, Gauri V, Vaillancourt D. *Evaluation of the World Bank's Assistance in responding to the AIDS Epidemic: Brazil Case Study* Washington D.C.: The World Bank;2005.
27. Nunn A. *The Politics and History of AIDS Treatment in Brazil*: Springer Science+ Business Media LLC; 2009.
28. Brazilian Ministry of Health. UNGASS Country Progress Report. 2010. http://data.unaids.org/pub/Report/2010/brazil_2010_country_progress_report_en.pdf. Accessed April 20, 2010.
29. AIDS AdNd. Distribution of condoms hit record in 2009. Dec. 24, 2009. <http://www.agenciaaids.com.br/site/noticia.asp?id=13706>. Accessed Jan. 30, 2010.
30. DKT Brazil. Annual condom Brazilian condom market projections. 2009.
31. Ministry of Health. Global Budget for the National Department of STDs, AIDS and Viral Hepatitis. Nov. 11, 2009
32. National Department of STDs HaVH. Financial performance of states and municipalities. . December 2009. <http://www.aids.gov.br/incentivo/>.
33. Marins JR, Jamal LF, Chen SY, et al. Dramatic improvement in survival among adult Brazilian AIDS patients. *AIDS*. Jul 25 2003;17(11):1675-1682.
34. Ministry of Health. Positive response: experiences of the Brazilian STD and AIDS programme. Brasilia. 2008.